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EXAMINER

PERVAN, MICHAEL

ART UNIT	PAPER NUMBER
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2629

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In regards to claim 6, "said receiver is adapted to be in communication with a keyboard" is not supported by the specification. The examiner was unable to find any reference to "said receiver is adapted to be in communication with a keyboard".

Therefore, it is unclear from the applicant's disclosure as to how "said receiver is adapted to be in communication with a keyboard" .

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Zloof (US 5,489,922; as submitted by applicant).

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In regards to claim 1, Zloof discloses a system for controlling the operation of an electronic device by a user (computer monitor 14, computer processor 16, computer keyboard 18), comprising:

at least two transmitters (Figure 1, col. 3, lines 45-48 and col. 5, line 58-col. 6, line 15; since there are two computer interface devices, each having an inner ring to which a transmitter (infrared light wave emitter) is attached, there are at least two transmitters) in communication with said electronic device, wherein said transmitters are adapted to be worn on said user's fingers (col. 6, lines 3-6);

at least one receiver configured to receive signals from said two transmitters (col. 6, lines 13-15); and

a control module (microprocessor chip 56) in communication with said receiver and configured to send control signals to said electronic device (col. 6, lines 7-15; control module (microprocessor chip) communicates with receiver via transmitter (infrared light wave emitter) and sends signals to electronic device (computer processor)).

In regards to claim 2, Zloof discloses the electronic device comprising a computer system (computer monitor 14, computer processor 16, computer keyboard 18) (col. 3, lines 28-32).

In regards to claim 3, Zloof discloses the control signals being cursor control signals (col. 3, lines 63-66).

In regards to claim 5, Zloof discloses each one of said transmitters being coupled to a ring (col. 6, lines 3-6).

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5. Claims 7-9, 11, 15 and 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Fäger (US 6,157,368; as submitted by applicant).

In regards to claim 7, Fäger discloses a method of generating control signals for controlling an electronic device comprising:

calculating a three dimensional location of each of at least two transmitters (transducers 10A, 10B) (Fig. 11, col. 6, lines 11-19, 25-28 and col. 14, lines 39-52); and generating a control signal based, at least in part, on changes to the location of at least one of the transmitters (transducers) (col. 14, lines 46-52).

In regards to claim 8, Fäger discloses the changes to the location of at least one of the transmitters comprise changes in the location of the transmitter relative to at least one receiver (col. 6, lines 46-50; since the positions of the receivers (signal sources) is presumed known then the position of the transmitters (transducers 10A, 10B) must be what is changing and is relative to the receivers (signal sources)).

In regards to claim 9, Fäger discloses the changes to the location of at least one of the transmitters comprise changes in the location of the transmitter relative to at least one other transmitter (col. 14, lines 46-52).

In regards to claim 11, Fäger discloses the electronic device is a computer and the control signals control the position of a cursor on a computer display (col. 14, lines 30-38).

In regards to claim 15, Fäger discloses wherein generating the control signal is based, at least in part, on comparing the changes in location to a user-defined pattern (col. 14, lines 39-67; since the control signals are used in controlling a CAD display, the

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user-defined patterns emulate the object in the CAD display and its movements.

Therefore, the control signals are based in part on the user-defined patterns from the CAD display).

In regards to claim 19, Fäger discloses a system for controlling an electronic device comprising:

means for calculating a three dimensional location of at least two transmitters (transducers 10A, 10B) (Fig. 11, col. 6, lines 11-19, 25-28 and col. 14, lines 39-52);

and means for generating a control signal based, at least in part, on changes in the location of at least one of the transmitters (transducers) (col. 14, lines 46-52).

In regards to claim 20, Fäger discloses said electronic device is a computer (col. 14, lines 30-38)..

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zloof.

In regards to claim 4, Zloof does not disclose the transmitters being configured to generate an identification signal.

It would have been obvious at the time of invention to modify Zloof to include an identification signal because it would allow the computer to distinguish between the

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horizontal movement signals and vertical movement signals being produced by the rings on the left and right hand of the user.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fäger.

In regards to claim 10, Fäger does not disclose receiving an identification signal from each of the at least two transmitters wherein the control signal is based, at least in part, on the identification signal.

It would have been obvious at the time of invention to modify Fäger to include an identification signal because it would allow the computer to distinguish between the horizontal movement signals and vertical movement signals being produced by the rings on the left and right hand of the user.

9. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fäger in view of Zloof.

In regards to claim 12, Fäger does not disclose that the transmitters are adapted to be worn on a user's fingers.

Zloof discloses that the transmitters are adapted to be worn on a user's finger (col. 6, lines 3-6).

It would have been obvious at the time of invention to modify Fäger with the teachings of Zloof, transmitters adapted to be worn on a user's finger, by replacing the transmitters (transducers) of Fäger with the transmitters of Zloof because it frees the user's hand and allows the user to move their fingers so that they can grasp things or type.

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10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fäger in view of Badarneh (US 2004/0051392).

In regards to claim 13, Fäger does not disclose the electronic device is a personal digital assistant.

Badarneh discloses the electronic device is a personal digital assistant (paragraph 32).

It would have been obvious at the time of invention to modify Fäger with the teachings of Badarneh because its more mobile, easier to carry and smaller than most other electronic devices.

11. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fäger in view of Lucas et al (WO 93/04424 A1; as submitted by applicant).

In regards to claim 14, Fäger discloses calculating the three dimensional location comprises measuring a transit time of a signal from each of the at least two transmitters to each of at least three receivers.

Lucas discloses measuring a transit time of a signal (page 8, lines 20-22; since the distance is being determined, the transit time is also being measured because the distance traveled is known as well as the speed at which the pulse train traveled, therefore the transit time is known as well).

It would have been obvious at the time of invention to modify Fäger with the teachings of Lucas, measuring a transit time of a signal, by incorporating the teachings of Lucas into Fäger because it's quick and accurate.

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12. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fäger in view of Zloof in further view of Lucas et al.

In regards to claim 16, Fäger discloses a system for controlling an electronic device comprising:

at least two transmitters (col. 14, lines 39-41);

at least three receivers (M1, M2, M3, M4) configured to receive a signal from the transmitters (Fig. 1); and

a controller (CU) configured to generate a control signal based, at least in part, on changes to a location of at least one of the transmitters (col. 6, lines 25-28)

Fäger does not disclose transmitters adapted to be worn on a user's fingers and wherein the controller is configured to calculate the location of each of the transmitters based on a distance of each of the transmitters measured from each of the receivers.

Zloof discloses transmitters adapted to be worn on a user's fingers (col. 6, lines 3-6).

It would have been obvious at the time of invention to modify Fäger with the teachings of Zloof, transmitters adapted to be worn on a user's finger, by replacing the transmitters (transducers) of Fäger with the transmitters of Zloof because it frees the user's hand and allows the user to move their fingers so that they can grasp things or type.

Fäger and Zloof do not disclose wherein the controller is configured to calculate the location of each of the transmitters based on a distance of each of the transmitters measured from each of the receivers.

Lucas discloses wherein the controller is configured to calculate the location of each of the transmitters based on a distance of each of the transmitters measured from each of the receivers. (page 8, lines 20-22).

It would have been obvious at the time of invention to modify Fäger and Zloof with the teachings of Lucas, measuring a distance of a signal, by incorporating the teachings of Lucas into Fäger because it's quick and accurate.

In regards to claim 17, Fäger discloses the electronic device being a computer (col. 14, lines 30-38).

In regards to claim 18, Fäger does not disclose at least one of the receivers being mounted on said electronic device.

Lucas discloses at least one of the receivers (transducer 2) being mounted on said electronic device (Fig. 1 and page 7, lines 5-9).

It would have been obvious at the time of invention to modify Fäger with the teachings of Lucas because the location of the receiver with regard to the electronic device would always be known and therefore would be a good reference point for calculating distances.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Pervan whose telephone number is (571) 272-0910. The examiner can normally be reached on Monday - Friday between 8am - 5pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MVP
Sept. 26, 2006

AMR A. AWAD
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read "Amr A. Awad", with a stylized flourish at the end.